



COLORADO SPRINGS,
COLORADO

DECEMBER 1989

PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521
Colorado Springs, CO 80935

FIRST CLASS MAIL



Ø BEAT



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 *Rose Calaway W4MNL 616 North 31st Street 471-9963
 Ron Deutsch NK0P 4305 Ridgeline Drive 80918 593-8332
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* denotes the first year of a two-year term.

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., P.O. Box 16521, Colorado Springs, Colorado 80935. Cost is 50¢ per month for non-members or a \$6.00 per year subscription. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of each month at 7:00 p.m. All amateurs and interested parties are invited to attend.

EDITOR: Ron Deutsch NK0P 4305 Ridgeline Drive Colorado Springs, Co. 80918 (719) 593-8332 or 145.01 (Packet)

FROM THE PRESIDENT....

A month has gone by already and once again Ron (NK0P) is twisting my arm to provide filler (a message from the president, but with one arm behind my back that would be too much to type). This month I would like to remind you of a few important upcoming events.

First on the list is the December club meeting and Christmas dinner. The business meeting will be short and the majority of the evening will be devoted to social activities. The Elk's Lodge is putting on a buffet dinner for \$10 per person. In the past, there were frequent complaints about high cost (\$10 is about as low as you can go and retain quality) and competition with other December activities (since it's on our regular club meeting night you shouldn't have any schedule conflicts this year). Give Renay a call today (591-6438) and reserve a seat. Hope to see you there.

The big topic of discussion around town should be "What are you building for homebrew night?" Haven't heard much about this over the air waves, but with six weeks to go there is still lots of time to gather up parts and put something together.

And it's never too early to start thinking about our annual swapfest. We have gained a reputation over the past few years for having the best swapfest in Colorado. Each year a dedicated group of volunteers is needed to sell tickets, rent tables, and do all of the things that ensure success. This year we are still hoping that ICOM will be represented at our swapfest on 19 May, but with the demise of our local ham radio sales location that becomes more difficult. I will be looking for help in the near future and will start selling tickets as early in the year as possible.

Last but not least, the board has been working towards the purchase of a basic VHF repeater for use by the club in support of special events. I have confirmed that there are two repeater pairs available in this region for special events, and have accumulated catalogs and spec sheets from several vendors. Any club member with repeater expertise to share can reach me at 599-7665 (home) or 554-3341 (work). Your assistance will be greatly appreciated.

That's about all the filler I can come up with this month, so I'll sign off. Have a happy holiday season and may the new year bring you lots of new toys, countries, states, grid squares (your choice).

73's Rick WB7THT

PPRAA CHRISTMAS PARTY DECEMBER 13TH
CONTACT RENAY KAØROY 591-6438

1989-90 PPRAA OFFICERS AND BOARD OF DIRECTORS

PRESIDENT:

Rick Kile, WB7THT, Advanced, ex WN7GCJ
Portland OR. 1966

Interests: RTTY, UHF/VHF, AMSAT.

VICE-PRESIDENT:

Dave Banks, N0ION, Technician, ex G8BEX,
England 1966

Interests: Microwaves, VHF/UHF, Homebrew.

SECRETARY:

Al Vrooman, N0CMW, Technician, San Diego,
CA. 1980.

Interests: VHF/UHF, 6 meters, MARS.

TREASURER:

Rosie Calloway, WA0MNL, Advanced, 1965
Colorado Springs.

Interests: CW, Club Activities, Public Service,
Social Activities.

BOARD OF DIRECTORS

Lauren Libby, KX00, extra, ex WN0LSH,
WA0LSH, 1965 Smith Center KS.

Interests: VHF/UHF, Microwaves, Homebrew,
VHF DX, Contesting.

Max Stafford KD0EL, Extra, 1980

Interests: VE testing, CW, Packet

Ron Deutch, NK0P, Extra, 1980, ex KA7JXO,
KC7QJ, Cheyenne, WY.

Interests: VHF/UHF, Homebrew, old gear.

Floyd Bryant, KB5PCN, Technician, 1987, San
Antonio, TX.

Interests: Short wave, public service.

BOULDER TOWER UPDATE...

de K40QPV

A court hearing has been scheduled for NQ01/N6DIY in the matter of their tower/antenna case before the Federal Court of Appeals. The date has been set for Monday December 11, 1989. Ahead of this, the litigants have been instructed by the court to meet between themselves in another attempt to settle before the scheduled hearing. Boulder County will have decided, by the time this newsletter reaches you, whether they will attempt to reach settlement out of court. Announcements will be made on the Monday evening 2 meter net on the 146.76 repeater concerning the progress in this current round of events. Please tune in for the latest developments as they occur.

TELEPHONE NUMBERS TO ELECTED REPRESENTATIVES

George, WD0K

TOLL-FREE TELEPHONE NUMBER: While everyone seems to be unable to find the time to write to their representatives, our representation as individuals continues to diminish.

It is now possible to call your elected representative (Representatives and Senators) toll free. Dial 1-800-222-2264, when the operator comes on line, ask for your elected representatives office. When you call, keep in mind that you will not actually speak to the Senator/Representative, but will be leaving a message with the receptionist or another staff aide.

Say that you are calling to voice your opinion on Most likely, the aide will ask for your name and address. It is important that you provide this information, because your Senator/Representative will want to write to you later to thank you for calling and let you know his position on the issue, or how he voted.

Remember, you have as much right to air your opinions to your legislator as any other American citizen.

The Novice's Antenna

OR

Why don't I measure 50 ohms across my coax?

by Bob Wite, KB0CY

The doorbell rang. At the door was The Novice. I had first met him a few weeks ago when he moved in down the street from me. His perceptive eye had spotted my dipole strung between the trees in my back yard and he was anxious to make contact with a local radio amateur. It turns out that he had gotten his novice license about 6 months ago, but with moving across the country he hadn't had a chance to get on the air. Now here he was again at my doorstep.

"Elmer," he says (Of course, my real name is not Elmer but amateur radio stories always give the name Elmer to hams who give out wise advice.) "Elmer," he says, "I'm in the process of putting up my 220 MHz antenna but I seem to have gotten a bad batch of coax from the local electronics store. Either that or my ohmmeter is broken."

"Hmmm," I said profoundly, "I've bought alot of stuff at that store and I've never had any problems with their cable. What makes you think it is bad?"

"When I bought the coax, I specifically asked for the 50 ohm stuff and just to make sure I decided to check it with my ohmmeter. I tried measuring it every which way I could and the only resistance readings I could get were 0 and infinity."

"Oh, I think I understand the problem," says I, knowingly. "The characteristic impedance of the cable is certainly 50 ohms, but that is the impedance that an RF signal would see. Your ohmmeter only knows about DC voltages and currents. So it will only measure the DC resistance, which has nothing to do with the characteristic impedance."

The Novice shook his head as if he understood — either that or he was trying to slosh his brain around in an attempt to make things more clear.

After a quick thanks, he disappeared down the street. I quickly returned to the magazine article I had been reading: "How to Work DX on a Dummy Load."

About an hour later, as I was resting my eyes (actually I was asleep), the doorbell rang again. I knew who it was. The Novice explained that he had this characteristic impedance thing figured out now, but he had another problem. "I've got a dead short across the coax and it seems to be caused by my antenna. I checked the coax alone with my ohmmeter to make sure the inner conductor was not in contact with the shield. It was OK, but when I hooked up my antenna, I get zero ohms from center conductor to shield. I guess I've got a bad antenna."

"What kind of antenna are you installing?" I inquired, anticipating the problem. "It's one of those Full-Duplex Hybrid Half-wave antennas built by

Eitherwave Electronics Company. They're supposed to be really good antennas, but I guess mine is defective."

The Novice responded, "I looked over the antenna very carefully and I couldn't find anything obviously shorted. Must be a hidden flaw." "That particular antenna does have a short across it — for DC. The matching technique used produces a short directly across the two antenna connections," I tried to explain. The Novice looked at me like I was trying to sell him some soggy land in Florida. "How can an antenna have a short across it? Isn't that going to be a bit of a problem when my transceiver tries to apply power to it?"

I tried to recover my credibility. "It's only a short for DC. At the transmitter frequency, assuming the antenna is tuned properly, the antenna will be 50 ohms." The Novice was unconvinced.

"You mean that the antenna can look like a short to my ohmmeter, but still be 50 ohms to my transceiver?" "Yes. That's exactly right. A side benefit is that the DC connection will tend to bleed off any static charge which might develop on the antenna, which is an advantage. Of course, you still have to ground your antenna properly. Not all antennas look like a short at DC. In fact, many of the simple ones do not — 1/4 wave ground planes and dipoles, for example." "I think I understand now. It's normal for this antenna to look like a short to the ohmmeter, but it will still be 50 ohms at the transmitter frequency."

The Novice disappeared down the street. I resumed my horizontal position and concentrated on working DX in my dreams. The doorbell must have rung a dozen times before I woke up. The Novice was persistent. "Yes?" I said. I tried to keep the proper attitude. I mean, radio amateurs have a long history of befriending newcomers to the hobby. I didn't want to mess with history.

"I got all of that antenna short-circuit stuff figured out, but now that I've got everything hooked up properly, I get an SWR reading of 5 at the transceiver. I've tried tuning the antenna, but I can't get the match any better. Something's definitely wrong," The Novice explained.

Wanting to make a point about SWR, I launched into my "SWR does not have to be 1:1" sermon. "An antenna system can function quite well even if the SWR is not a perfect 1:1 match. In fact, my 40 meter dipole, with which I have worked every DXCC country at least 50 times has an SWR as bad as 5 at the band edges." The sermon continued with the fine points of working DX, why CW can get through when SSB can't and a few technical details about power transfer in the face of high SWR.

The Novice stared at me blankly. Returning back to reality, I said "Of course, in this particular case, there is every reason to expect a good SWR reading over most of the 220 MHz band. A standard 220 MHz rig working into 50 ohm coax driving a 50 ohm antenna should produce an SWR of 1.5 or less at the resonant frequency of the antenna. The SWR may

degrade at frequencies away from resonance, but probably not as bad as you are experiencing." The Novice was despondent. "I'll bet it's my SWR meter. I bought it at a swapfest last year. It probably just doesn't work. Or maybe the coax really IS bad. Or is it the antenna?" "In order to determine that, you need to try a methodical approach to troubleshooting the problem. Do you have a good 50 ohm dummy load?" I said. "Yep. At least I think it's a good load."

"OK. First, establish a reference point that you can believe. Connect the dummy load to the transceiver with the SWR meter in between, using some short sections of coax. Measure the SWR of this system -- it should be quite good. If it isn't, there is probably something wrong with either the dummy load or the SWR meter. Oh, yeah, it could also be a problem with the cables."

"But isn't that just measuring how good the dummy load is? Why do I care? The problem is in the antenna system," The Novice said. "Measuring the dummy load verifies that the SWR meter and dummy load are working properly. The reading should be close to 1:1 and shouldn't vary much if any. Be sure to check for loose connections by wiggling the cable and connectors and watching that the reading doesn't change."

The Novice was starting to catch on. "So after I know my meter and dummy load are OK, then what do I do?" "You start working your way through the antenna system, verifying each section as you go. Install the dummy load where the antenna is connected and check the SWR at the transceiver end. Wiggle the connectors and cable to check for loose connections."

Again, the reading should be very close to a perfect match. If it isn't, then the coax, or more likely, the connector has a problem. I've seen a lot of perfectly good coax replaced because of a connector problem. The coax braid is usually the biggest problem. Either the braid does not get soldered to the connector solidly or a strand of the braid shorts to the center conductor.

Another thing to watch out for is getting the connector so hot that the inner insulation melts, causing a short. "And if the coax checks out correctly, then I connect the antenna back up, right?" says The Novice. "Right. And it should exhibit a reasonable SWR. It may require some tuning to optimize the SWR across the band, but it should be relatively good to start with."

Using this technique, you should be able to isolate your antenna system problem to the right area. "So my ohmmeter is basically useless for antenna work?" asked The Novice. "No, not really. It just can't measure at radio frequencies. It is still useful for checking for basic continuity, but only at DC. Usually a poor DC connection is also a poor RF connection, but you must be a little careful in interpreting the results. Checking the coax with an ohmmeter certainly makes sense. You can find dead shorts between the inner and outer conductors. Also, if both ends of the

coax are not too far apart, you can check for continuity on the center conductor and on the shield."

"But I already installed the coax, so one end is up on my roof and the other is in my ham shack." "One trick you can use is to connect your dummy load at the antenna end and read the resistance from inner conductor to shield at the transceiver end. It should read 50 ohms plus a little extra for the resistance of the cable. If it reads infinity, then you have a faulty connection in one of the two coax conductors" I said. Armed with this newfound knowledge.

The Novice marched back down the street. I retired to the ham shack to see what important news was waiting for me on the local packet bulletin board station. "Hmmm, 'FCC Proposes Merging Amateur Radio with Cellular Telephone'. That should be an interesting bulletin."

An hour later, the doorbell rang. I knew who it was. But this time, The Novice was beaming with the look of success. "I fixed the problem! It was a poor solder joint on the PL-259 connector at the antenna end. Thanks for your help, Elmer. Now I've got this idea. Suppose we modify my ohmmeter to work at radio frequencies"

1989-90 SWAPFESTS

LARCFEST--Boulder County Fairgrounds Saturday April 7, 1990.

PPRAA--Saturday May 19, 1990 at the Rustic Hills Mall.

NOTE: If you know of any Colorado Swapfests not printed here please let me know and I will include them in the next issue.

'THE VIEW FROM THE PEAK'

by George Hinds, N8CIX

Spending more time of late listening on HF, I've become convinced that we have our fair share (and maybe more than our share) of mean-spirited crackpots out there who could best be served by incarceration or a brain transplant. To those who argue against a "no-code" class of license solely on the basis the CW requirement keeps that kind out of ham radio, I reluctantly say, "balderdash".

Listening to W1AW will prove my point. - The interference is too often unbelievable and it's mostly, and very obviously, deliberate - with the "testing 1-2-3's" and the raucous noises, tuner-uppers and other miscellaneous forms of idiocy.

Then you can tune over 40M & 75M and hear the "motor mouth" crackpots going on indefinitely -- the religious zealots, the political zany's, etc., etc. If the FCC could find a way, and the money, to round up this bunch and herd them into a corral, an army of "shrinks" could do a land-office business for several years...It's not bad enough to have what appears to be an international "third party" dispute going on 20 meters; we have this added problem to suffer...

IT'S TIME TO BRING FORTH ONCE AGAIN "THE AMATEUR'S CODE"

The Radio Amateur is:

CONSIDERATE ...never knowingly operates in such a way as to lessen the pleasure of others

LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE ... with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY ...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for interests of others. These are the hallmarks of the amateur spirit.

BALANCED ...radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC ...station and skill always ready for service to country and community.

A WEALTH OF INFORMATION:

Yessiree, bob, there's a lot of good information that plenty of people are not aware of in that little pocket-sized book by the ARRL entitled "Repeater

Directory" and the cost is just \$5 for the current edition.

Much of the misunderstanding in the use of VHF-UHF is brought about by the seeming lack of knowledge by many in relation to band plans, simplex frequency assignments, CTCSS, experimental work, Space and such things. Many don't know what "CTCSS" is, why it's in use, how and when to use it and what it does. On the other hand, of course, one understands that if these subjects are not covered in study texts and examinations, or are not experienced by VHF-UHF users, it's to be expected that they would most likely be in the dark about such things..

Not only does the booklet list repeaters from 6 meters up to the 1240 MHz range, plus ATV and Packet systems, but it tells about how to deal with deliberate interference, "jammers", what band plans are in effect, various committees involved with VHF and UHF operations, and other valuable information. The current edition is for 1988-1989 and can probably be found at a discount price; a new edition usually appears about the time of the Dayton Hamvention (April).

MOUNTAIN WEATHER IN TELLER CO., COLORADO

It's been a fantastic Fall season here along the front range of the Colorado Rockies, especially so in Teller County - perhaps the kind of weather that is so pleasant that one wonders when a cold blast of Canadian air will arrive with snow to match. Daytime temperatures have varied from the 40's to the 60's along with clear skies and bright sunshine; nights have been hovering near the freezing mark.

Since we're away from the big city lights, the night skies are made for star watching; many folks come up from the city at night to drive even farther west of our town to set up their telescopes in areas away from all habitation in order to have nearly total blackness.

Everyone to their own thing: while I may peep out the door at a bright star once in a while, more often than not I find myself spending the evenings inside and sometimes with a wood fire going, reading, on the radio, with the computer, or watching TV. This warm weather can't last forever; we'll enjoy it while it lasts.

As Christmas and another year draw near, to all of our PPRAA friends we send our very best wishes for good health and good cheer in the holiday season ahead.

73, George, N8CIX (and Thelma, too).

VE EXAMS

Max Stafford, KD0EL

The next VE testing will be held at Chapman College on 9 Dec 89.

THIS TEST WILL BE PRE-REGISTRATION ONLY!

Please send me a completed 610 and a check for \$4.75 written to the ARRL/VBC. Having the 610s filled out and checked saves us about 3 minutes each.

Send pre-registrations to:

Max Stafford

PO Box 35

Palmer Lake, CO 80133

PUEBLO VE TEST

VE examinations will be held at the Pueblo Police Academy Training Room on December 16th.

Contact: Jon Mihalick, WB0YES
1050 Baxter Road
Pueblo, Colorado 81006
(719) 948-2291

DECEMBER BOARD MEETING

The December Board of Directors meeting will be on Monday, December 18th, at 7pm at the QTH of Al, N0CMW.

Interested club members are invited to attend

**DEADLINE FOR JANUARY 1990 O-BEAT
WILL BE DECEMBER 30, 1989.**

**REMINDER: JANUARY WILL BE
HOMEBREW NIGHT. CASH PRIZES!!!!**



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MINUTES OF NOVEMBER

GENERAL MEETING

NOV. 8, 1989 ELKS CLUB

NORTH NEVADA

submitted by Al, N0CMW, Secretary

Meeting convened by president Rick WB7THT at 1900 hours local by introduction of everyone. Minutes were approved as in 6-Beat.

Treasurer report:

Previous balance \$2007.05

Income \$168.00

Expenses \$163.74

Present balance \$2011.31.

The meeting was reversed as our guest speaker MARSHAL QUIOT AG0X had to get back to Denver. He gave us a very nice talk on the ARRL. He also answered any questions brought to him. Write to your house rep and senators on the passed 30 to 35 dollar fee for amateur license. This is for any changes, even change of address so you are legal. The next WARC will be in 1992.

Club purchased a Uniden 2510 as a Christmas raffle prize chances \$1.00. It will be given away at the christmas party and business meeting at the Elks Club Dec. 13, that is if we have sold enough to pay for it.

COMMITTEE REPORTS

RFI Ron NK0P 593-8352. He resigned. Jeff N0JHL volunteered for the job his phone number is 591-6438.

Education Bud N0DDF 475-0537 Class is over. Class produced one new novice, several others passed theory part.

D&B School Bud N0AA 689-2963 Classes will resume this month.

ARES John N0KIC 635-1604 Mike K0TER 636-1390 now District 14 ARES leader, please sign up with him or John. N0AA Bud 689-2963 will be handling Teller Co. John El Paso Co.

PUBLIC SERVICE Mike K0TER 636-1390 nothing.

CCARC Oak K0ROL 570-7782 nothing new. Next meeting in Boulder Dec. 11.

V.E. TESTING MAX KD0EL 488-9289, Next testing Dec. 9th at Chapman College, Flintridge and Academy, pre-registration required.

6-BEAT Ron NK0P 593-8352 Thanks to every one for news, we have cut back to 250 copies, none to non advertisers now. Will take any editorial in if good taste, trivia will be reinstated.

OLD BUSINESS

Christmas party will be at Elks club with a short business meeting. Renay KA0ROY has the sign up sheet 591-6438. Ten dollars a head full dinner sit down style, but buffet line to get it. Let her know as soon as possible.

NOTE: THIS IS DEC 13 AT 6PM

NEW BUSINESS

Nick KGSN will have an estate sale for Brad, KD0VM Sat NOV. 11.

There will be a Tx hunt sat at noon NOV 11.

Next board meeting at QTH of Dave N0ION.

Prizes were distributed by Floyd KBSFCN winners were:

KQ0S JOE, soldering iron,

SAHRA LEE N0IZQ calculator,

AL AD0Z FCC rule book,

OAK K0ROL Rptr. directory,

RICK N0JZM tie wraps,

HARVEY WJW, Mel Tilles tickets.

No further business, meeting adjourned at 2030

MINUTES of NOVEMBER

BOARD MEETING

BOARD MEETING NOV. 16, at QTH of Dave N0ION. The following members were present:

Rosie WA0MNL, Max KD0EL, Jeff N0JHL, Renay KA0ROY, Al N0CMW, Ron NK0P, Rick WB7THT, Floyd KBSFCN, Russ O.M. OF Rosie.

RUSS PASSED HIS NOVICE TONIGHT, CONGRATULATIONS.

The entertainment for the christmas party was not decided at this time as the board thought not to spend the sum needed for D.J. for the few signed up. It was decided to earmark \$1200.00 for a repeater pending assignment of repeater pair. \$700.00 for May swap-fest.

Newsletter will be a week early to try and give people chance to sign up for Christmas party

Decided that the time of meeting will stay at 7pm
NOTE CHRISTMAS PARTY WILL BE AT 6PM AT ELKS CLUB.

A audit committee of Dave N0ION and Rick WB7THT was formed..

Next board meeting will be at the QTH of Al N0CMW on MONDAY DEC 18.

It was brought up to remind Tx hunters to stay off of private property, as Rick got a call from irate land owner about the ones trespassing so if u are Tx hunting please observe private property.

Nothing further meeting adjourned at 2100.

Submitted by Al N0CMW Secretary.

SILENT KEY

PPRAA regrets the passing of former Colorado Springs Ham, George Kowalski, W0GCH.

WANTED

Net control stations for the Southern Colorado Traffic Net which meets nightly at 8 pm local time on the 146.97 repeater. No experience necessary. Contact N4TGO/Doug during the net or at 495-4908 after 5:15 pm

CRIPPLE CREEK RADIO CLUB

The Cripple Creek Amateur Radio Club meets daily at one of the local restaurants (which ever is open on the particular day) at approximately 0930 hours. Every one is welcome. Talk-in frequency is our 145.46 repeater which is accessible from the town to Gillette, CO. We also monitor 146.52 simplex.

If you are not in time for the regular meeting, please give us a call on either of the afore mentioned frequencies and we will call a special meeting (may take fifteen minutes to arrange.)

If you forget your radio or the frequencies, stop the local cop or go to the Teller County jail and ask them to call us. We monitor the local government frequency and the sheriff's channels.

If you don't have time to stop for a few minutes, please give us a call just to say hello!

N0AA, Bud; N0KYZ, Terry; N0LDL, Rupe; KD0OZO, Del (warm wx only!).

NOTICE!

Contrary to some reports C. W. Electronics has not gone out of the Ham business, just consolidated most of it in Denver. Can be had at local store in 3 days. Contact Al N0CMW

1934 Official

SHORT WAVE RADIO MANUAL

edited by Hugo Gurnsback

Build simple, high performance old time shortwave radios!! You can—all of the secrets are here: the circuit diagrams, parts layout, coil specifications, construction details, operation hints and much more. A classic for experimenters, shortwave listeners, ham radio operators, old time radio collectors and just about anyone interested in old-time radios. Even if you never get to build one of these radios, you're sure to get hours of enjoyable reading out of this book. 8 1/2 x 11 Paperback, 260 pages. ISBN 0-917914-64-3



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DITS AND BITS

FOR SALE OR WANT ADS WILL BE RUN FREE OF CHARGE TO CLUB MEMBERS. OTHERS ARE \$2 MAXIMUM 25 WORDS. SEND ADS TO O-BEAT EDITOR BEFORE THE LAST DAY OF THE MONTH FOR INCLUSION IN THE NEXT ISSUE.

ESTATE SALE: Much remains of the estate of Brad KD0VM. If you are interested in looking over the radio related items please contact Nick, KG5N at 593-8603 to arrange a time.

FOR SALE: Heath Twins--HR 1680 and HX1681. CW rig, power supply, meter. \$150 or trade for a HT amplifier. Mark N0EPF 596-6916.

FOR SALE: D2999 Phillips/Magnovox world receiver. \$295. Mark 684-9723 after 5pm.

FOR SALE: Digital weather station. ID 1990 Barometer with storage of high/low and rate of change. \$150

ID1890 Wind Computer. Stores peak gust. Read out in MPH, KM, or Knots. High Quality infrared sensor system. \$150

ID 2295 Digital humidity sensor. Reads both indoor and outdoor humidity. \$50

Digital indoor/outdoor thermometer with variable alarm. \$30.

Will sell separately as above or in a package for \$300. Includes all technical data and cables.

FOR SALE: Commodore 128 computer w/2-1571 disk drives, 2002 RGB monitor, 1200 and 300 Baud modems, KPC1 TNC. All for \$600. Contact A1N0CMW 473-1660 after 6pm.

FOR SALE: Rohn 25 top section with thrust bearing and rotor plate. \$80

Drake MN2000 antenna tuner w/SWR Meter. \$150

Bird 500 watt 50 ohm dummy load. \$100
Ron NK0P 593-8352

WANTED: 2 meter mobile rig with minimum 25 watts high power. Fully synthesized with tuner on the mic. and scan for active frequencies. Planning to spend \$200 to \$250. Also need 5/8 wave antenna.

Contact Mike Silverplate, KR9Q at 531-5038 (H) or 548-2308 (W)

ACADEMY RADIO CLUB MINUTES

The Academy Radio Club met on 7 November 1989 at the Tee House on the Air Force Academy at 1130.

The meeting was called to order by the President, Doug, N0HJT. In attendance were:

Doug, N0HJT;
Ron, NK0P;
Oak, K0ROL;
Rick, WB7THT;
Floyd, KB5FCN;
Bud, N0DDF;
Rosie, WA0MNL; and Russ (Rosie's OM).

We welcomed two new members, Oak and Rick. (We also recognize George, N8CIX as a new member. His dues was received after this meeting)

The minutes of the last meeting were approved as written in November O-Beat.

The club treasury stands at \$106. We discussed ways we could help in the coming PPRAA swapfest and had a nice informal roundtable on various ham radio related topics. The meeting was adjourned at 1245.

The next meeting will be held on December 12th at 1130.

For information about the Academy Club or to join contact Ron, NK0P. Dues are \$6 annually.

73s NK0P, Sec/Treas.

A.R.E.S.

John Chapman N0KIC

The weekly ARES NET time has been changed. Starting Dec. 5th, we will meet Tuesdays at 7 PM on the 146.37/97 repeater.

We are still trying to collect old ARES member files as well as setting up new ones and getting new cards and other supplies from the ARRL. In order to keep the mailing costs down, we will be contacting past, present and future members in other ways (telephone, radio, at breakfast) to get their info for the files. Having a member file showing equipment, interests and area of expertise is essential for an ARES group.

You don't have to wait for us to call you, CALL US.

Dist 14 EC Mike, K0TER 636-1290 or PACK-ET via KA0WIE 145.09

Asst. EC Teller Co. Bud, N0AA 689-2983 or 145.46 repeater

Asst. EC El Paso Co. John N0KIC 635-1604 or 146.37/97 or 146.52.

PUBLIC SERVICE - PAST

by KOROL

PPRAA as an active "special service club", has participated in many very complex and demanding projects of national importance! I refer in particular to the National Sports Festival, held in Colorado Springs in 1978, 1979 and 1983. Those of you who were involved will remember your personal contributions. For new and prospective members of PPRAA, it may be of interest to see some of this recent history. In the 1978 Sports Festival, we pioneered many innovations. The "Venue Network" was handled on 146.52 MHz simplex, with over 20 venue sites, the NCS being set up at the National Olympic Training Center at Boulder and Union Boulevards. RF paths were between the Air Force Academy, Fort Carson, and many sites in the COS public school gymnasiums and public parks. A 220 MHz overlay net was established between the OTC and AFA for coordination and control.

In 1979, the PPRAA, having proven itself as a "special service club", was requested to serve again! This opportunity was greeted with typical club enthusiasm, with over 50 hams participating locally! This National Sports Festival (the second in history) began with a two-route running marathon over hundreds of miles of north, south, and western Colorado, destined to the very formal opening ceremonies at the AFA Stadium. Hams from all over Colorado participated, using HF and VHF media, following the runners from as far west as Grand Junction. Mobile rigs accompanied the running teams all the way. As planned, the runners arrived for the "torch-lighting" formal ceremony, top of the east amphitheater on schedule! What a thrill! The cycling "velodrome" had been opened in Memorial Park this year, and a new venue established for the National Sports Festival.

Another first was the transmission of "Amateur Fast-Scan Television" (ATV) of these events. In 1983, due to several political changes within the Olympic Committee, and other cities "getting into the act", the PPRAA's role was supported on a more "also participated" basis. We were able to muster over 50 licensed hams to professionally furnish communications for the various venues. In 1989, the PPRAA did an outstanding job of furnishing communications for the Colorado State Games for venues sited over dozens of miles of RF paths.

We can be proud of our service to the Colorado State Games, even though they weren't at the National level. It's a whole new ball game! If anyone wants to look at the (late, April 1980) editorials in 73 Magazine by Wayne Green, covering the 1979 National Olympic Sports Festival, I will photocopy them for you. I invited Wayne (WZNSD/1) to come to this event to get favorable publicity for PPRAA. Sorry it was 9 months late!

73, Oak KOROL

OEM PARTS

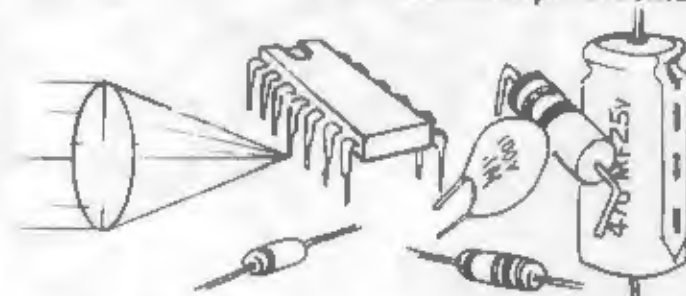
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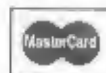
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W2CRS

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Denver, CO 80203
(303) 832-1111

610 E. Fillmore St.
Colorado Springs, CO 80907
(719) 473-2828





PPRAA CHRISTMAS PARTY

THE PPRAA CHRISTMAS PARTY WILL BE
HELD ON DECEMBER 13TH AT 6PM.

COST IS \$10 AND INCLUDES SIT DOWN
DINNER AND ENTERTAINMENT BY A BAR-
BERRSHOP QUARTET.

A SHORT MEETING WILL FOLLOW.

CONTACT RENAY KA9ROY 591-6438.

YOU CAN PAY AT THE DOOR BUT YOU
MUST BE ON RENAY'S LIST!

CU THERE!!

Membership Application PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521

Colorado Springs, CO 80935

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Name _____

Address _____

City _____ State _____ Zip _____

Call _____ License Class _____

Are You An ARRL Member? ☐ Yes ☐ No

Telephone _____

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☐ Family Membership \$15.00

☐ Newsletter Only \$6.00

☐ Age 65 or older, or under 18 \$8.00

Additional Names _____ Call _____ Class _____

Associate Member \$8.00

☐ (Outside Teller & El Paso Counties.)

PPRAA is not associated with the Pikes Peak FM Association.